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The Second Best Thing About Payday

nih record

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'Improve the System'

NIH Hosts H1N1 Flu Summit

By Belle Waring

On July 9, NIH hosted the White House's H1N1 Influenza Preparedness Summit, jointly led by HHS Secretary Kathleen Sebelius, DHS Secretary Janet Napolitano and Education Secretary Arne Duncan.

"I'm very grateful that all of you are taking this seriously," President Obama said by telephone link from L'Avila, Italy. "Although we were fortunate not to see a more serious situation in the spring, the potential for a significant outbreak in the fall is looming."

HHS Secretary Kathleen Sebelius (l), DHS Secretary Janet Napolitano (c) and Education Secretary Arne Duncan team up at NIH for a summit on flu.

The meeting assembled about 500 emergency managers, educators, school nurses and public health officials from around the country, including Dr. Nicole Lurie, nominated as assistant secretary for preparedness and response; Dr. Francis Collins, nominated as director of NIH; and Dr. Raynard Kington, acting director of NIH.

SEE **FLU SUMMIT,** PAGE 10

Ambitious Plans in Offing

FAES Marks 50th Year at NIH

By Rich McManus

As remarkable an invention of the federal government as NIH is—a common descriptor in recent decades has been "the crown jewel of government," thank you very much—there was a handful of scientists half a century ago who thought the National Institutes of Health was just a few ingredients shy of being a true Elysium.

It had a faculty—many hundreds of doctors—and a leafy, sprawling campus, but no teaching mission and no students, which had been such a source of inspiration and ferment on the campuses from which the scientists hailed. In order to keep the spirit of continuous education alive, a new, complementary entity was needed.

Thus it was that on July 2, 1959, the Foundation for Advanced Education in the Sciences, Inc., (FAES) came into being. Twelve prominent scientists, including future Nobel laureate Dr. Christian Anfinsen, drafted eight Articles of Incorporation specifying creation of a

SEE **FAES ANNIVERSARY,** PAGE 6

Policy To Govern Research that NIH Funds

Final Stem Cell Regulations Issued

By Carla Garnett

NIH released its final Guidelines for Human Stem Cell Research on July 6. They fulfill Executive Order 13505, which President Obama issued Mar. 9 to remove "barriers to responsible scientific research involving human stem cells." The guidelines, announced online and in a telebriefing by acting NIH director Dr. Raynard Kington, were finalized after officials spent about 5 weeks reviewing more than 49,000 public comments on the draft guidelines that were received from the scientific community, patient advocacy groups, and medical and religious organizations, as well as from private citizens and many members of Congress. The comments are posted on the NIH stem cell information web site at http://stemcells.nih.gov.

"We believe the final guidelines we are releasing today achieve both of the President's clearly stated goals of advancing the field of human embryonic stem cell research and raising the bar of ethical standards," Kington said. "With

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briefs

Online Tutorials for NIH Applicants

The Office of Human Resources has developed three online training tutorials to assist applicants with applying to jobs at NIH. Each tutorial is no longer than 15 minutes and can be viewed directly from the NIH jobs web page. All can be found at www.jobs.nih.gov.

The How to Apply to the NIH tutorial was created to walk applicants through establishing a USAJOBS account, creating a federal résumé, creating Job Search Agents in USAJOBS and uploading and submitting supporting documentation into the USAJOBS system. Additionally, the tutorial discusses the different areas of an NIH vacancy announcement.

The Checking Your Applicant Status tutorial reviews the fundamentals of checking an application's status on USAJOBS. The tutorial teaches applicants how to view the status of the application they have submitted, reviews how to request an email confirmation that their application has been received and reviews the different application job status codes (such as Referred for Selection Consideration, Qualified Not Referred, etc.) and what those codes mean.

The third and newest tutorial is Federalizing Your Résumé, which walks applicants through creating a strong and informative résumé. The tutorial examines the benefits of working for NIH, reviews examples of well written and poorly written résumés and goes over each section of a typical résumé to assist applicants in strengthening each section.

In addition, the NIH Jobs web page has been updated with a wealth of tools and information. Video clips of NIH staff discussing their jobs and experiences have been added along with employee stories, a slide show that highlights available NIH jobs and new job descriptions. The site also has a search function that allows job seekers to search all job repositories where NIH positions are listed, including USAJOBS, research and training opportunities and fellowships.

Principles of Clinical Research Class

Registration for the 2009-2010 "Introduction to the Principles and Practice of Clinical Research" is now open. The course will run from Oct. 19 through Mar. 9, 2010. The deadline for registering is Oct. 9. Classes will be held on campus on Monday and Tuesday evenings from 5 to 6:30. There is no charge for the course but purchase of a textbook is suggested. A certificate will be awarded upon successful completion of the course, including a final exam. For more information or to register, visit www.cc.nih.gov/training/training/ippcr/application.html or call (301) 496-9425.

FAES Class on Art Songs

The fall semester of FAES classes will include "Art Songs, a Guided Tour," which will feature lectures and live performances. The course will explore European and American art songs from the classical period to the 20th century. The lectures are intended for music lovers of all kinds, whether they have formal music training, a little background or none at all. For more information call (301) 496-7976 or visit www.faes.org.

COPR Nomination Process is Open

The NIH director is seeking applicants to fill vacant appointments for the 2010 Council of Public Representatives (COPR) roster. Nominations are due Sept. 25 and are available at the web address below.

The COPR advises the NIH director on cross-cutting issues related to medical research and health issues of public interest that ultimately promote individual, family and community health. The council consists of up to 21 individuals who are selected from among the diverse communities that benefit from, and have an interest in, NIH research, programs and activities.

For more information or to obtain a nomination form online, visit http://copr.nih.gov/nomination.asp. To request a nomination form by mail, contact the COPR staff by phone at (301) 650-8660, ext. 275, by fax at (301) 650-8676, or by email at COPR1@palladianpartners.com.

Grady Receives EEO Award

NINR director Dr. Patricia Grady (l) recently received the Making a Difference Award from the NIH Office of Equal Opportunity and Diversity Management. The purpose of the award is to recognize efforts in furthering diversity and equal opportunity in the NIH workforce. Lawrence Self, OEODM director, presented the award.

Researcher Describes Barriers to Health In Poor Communities

By Valerie Lambros

For all the talk of advances in race relations in the wake of the 2008 election, there is a lot of evidence that shows minorities in America have much further to go to achieve equality across the board.

One of the most striking categories is health.

To address this issue, the National Center on Minority Health and Health Disparities recently kicked off a new seminar series and, for its first event, welcomed speaker Dr. Brian Smedley, vice president and director of the Health Policy Institute and Joint Center for Political and Economic Studies in Washington, D.C. His organization, what he calls a "think and do" tank, not only analyzes the data coming out of scientific and public health studies concerning health equity and access, but also operates as a vocal player in the formation of health policy.

"How we apply science to policy is critically important," he said. "This is where the rubber meets the road."

Smedley laid out a wealth of information culled from numerous studies that indicates both black and Latino people in the United States face many hurdles to achieving consistent good health. The contributing causes of these hurdles include lower socioeconomic status, continued residential segregation, risks and dangers while on the job that can lead to accidents or hazardous exposures, and differences not only in patterns of health-seeking behaviors, but also in access to care and the level of care received once it's found.

For example, said Smedley, it is difficult to encourage minority communities to eat healthy foods and spend time outdoors when the resources to make that happen aren't a reality for people in low-income neighborhoods.

"Many of these neighborhoods contain a high percentage of liquor stores, convenience stores and fast-food restaurants," he said. "There is less access to quality foods, few sidewalks to walk on and few parks to play in. It does little good talking about eating five fruits and vegetables a day when they don't have a grocery store or farmers market nearby."

Further, many children of disadvantaged minorities fight an uphill battle just by virtue of being born into a poor family that lives in a poor neighborhood, especially if it's a community that experiences such a stark lack of options for healthy living. Add to that enrollment at a poor, mostly minority school funded by a depressed tax base, filled with aging books and facilities and taught by low-paid teachers, and you've got what Smedley calls triple jeopardy.

Dr. Brian Smedley gives the first lecture in a new health disparities seminar series.

PHOTO: MICHAEL SPENCER

"It's not the fact that our schools remain deeply segregated, it's the lack of resources associated with that segregation," he said. "Here we are some 50 years after the Brown vs. Board of Education decision. These limited resources for poor children constrain life opportunities. That means the experience of poverty for white children is very different, strikingly different than it is for children of color."

This all translates into a culture of recurrent, cyclical poverty that keeps poor people from achieving a mentally, emotionally and physically healthy way of life. And this is where Smedley says policy can play a big role by intervening to stop this cycle.

"We need to work for greater housing mobility, build incentives for farmers markets, structure land use and zoning policy to reduce the concentration of health risks and improve the physical environment of communities. And we need to expand opportunities for quality education," he said. Smedley indicated these interventions should be woven into the permanent fabric of neighborhoods.

"It's going to take a while," he said. "These are not 3- or 5-year interventions, they have to become part of the culture."

Smedley offered data that shows how effective intervention programs can be, using the widely regarded Head Start program as an example.

"For every $1 you invest in pre-school programs, you save $17 on the back end on things like health issues, incarceration costs, unemployment and other social services," he said. "That's certainly an argument for exposure to quality preschool programs."

Asked by an audience member how scientists can participate in policy-making without feeling like politicians and thereby compromising their objectivity, Smedley suggested that science has too long existed in a vacuum.

"We've got to get over these notions," he said. "We've got to start with our institutions, with our research and academic institutions and help [them] understand that the application of knowledge to policy and practice is why these institutions are created in the first place."

Smedley called for greater participation by minorities in the scientific and public health fields to help close the gap between science and understanding.

"It's not just an issue of trying to change the complexion of the faces around the room, it's a scientific issue," he said. "It's a question of who is asking the questions, how do we pose the questions that are being asked and how do we interpret what we're learning?"

The next seminar in the health disparities series will be Aug. 13 from 2 to 3:30 p.m. in the Natcher Bldg. Two speakers will discuss community-based participatory research.

these goals in mind, and reflecting on the many thoughtful comments we received, we have crafted guidelines to allow NIH to fund scientifically worthy research using responsibly derived human embryonic stem cells." The new policy took effect on July 7.

The Final: What's New, What's Not

Most major elements of the draft were left intact (see sidebar). "No changes were made to the basic requirements of eligibility as described in the draft guidelines," Kington pointed out.

Only research being conducted on human embryonic stem cells (hESCs) that were derived from embryos created by *in vitro* fertilization (IVF) for reproductive purposes only and that were in excess of what donor(s) needed for reproductive purposes will be eligible for NIH funding. The donor(s) must be the individual(s) who sought reproductive treatment and must have given voluntary written consent for the human embryos to be used for research purposes.

To aid investigators in identifying hESCs that are eligible for NIH funding, the final policy also establishes a new NIH Stem Cell Registry that will replace the previous one. Once a stem cell line has passed NIH muster, it will be added to the registry. Cell lines listed on the registry can then be used without further requests for federal approval.

Under prior presidential policy, 21 lines were listed on the NIH Registry. Since then, additional cell lines—estimated at about 700—have been derived with non-NIH sources of funding. Under the new policy, NIH will review any hESC lines for which information is provided by scientists through a web-based application form currently under development; the form will be posted soon on the NIH web site. The agency does not know how many of the existing lines will be eligible or are viable or available.

The final guidelines recognize that "informed consent is a process," Kington said. "It's not just what is written in an informed consent document." Therefore, exact wording for an informed consent form is not provided in the guidelines. Instead, he explained, the rules endorse a process "where all necessary details are explained to and understood by embryo donors."

Finally, stem cells derived via somatic cell nuclear transfer (SCNT, also called cloning) remain ineligible in the final rules.

The Review Process

For hESC lines that meet the new requirements exactly, there will be an administrative review that makes sure the documents submitted show that the requirements were met. However, some scientists may want to use cell lines that existed before July 7 but that do not meet the guidelines perfectly. Or perhaps the applicants will want to use lines developed from embryos donated in countries that have different but equal eligibility requirements. For these hESC lines, NIH will form an ACD (advisory committee to the director) working group.

The documents the applicants would submit to the work group include informed consent forms and other evidence that the principles of the new regulations were met. In the case of lines derived from non-U.S. donations, the documents must show informed consent protections that are equivalent to the U.S. requirements.

Although specifics have not been finalized, Kington said the work group would include at least one or two ACD members in addition to other scientists, ethicists, specialists in IVF and representatives from the public. The working group will report to the ACD, which will then report to the NIH director, who will make the final decision.

So, scientists who want federal funds to use hESCs will proceed in one of two ways:

- Submit proof that the stem cells they intend to use comply with the new policy and await NIH administrative approval, or
- Provide documentation and related information to the ACD work group, which will determine whether the cell lines were derived with the ethical integrity of the new NIH rules.

In all cases, NIH will make the final decision on which stem cell lines are eligible and therefore which stem cell research can be funded.

Funding, Timing Considered

Investigators, including those in the intramural program, with ongoing hESC research using previously eligible lines can continue. The first

The Basics of Eligibility

As in the draft document, the new guidelines clearly spell out how the human embryonic stem cells (hESCs) must have been derived.

The embryo

- must have been created for reproductive purposes, via *in vitro* fertilization,
- must be in excess of clinical need,
- and must have been donated voluntarily.

Written informed consent for research must have been obtained from the donor(s).

Information about hESC research must have been provided to the donor(s) in a robust informed consent process.

No research involving hESCs derived from a cloned embryo or parthenote (further-developed unfertilized human egg), or created by IVF but specifically for research, will be funded.

Donors cannot have been offered payment either in cash or in kind.

Read the entire policy at http://stemcells.nih.gov/index.asp.

NIH grants for research using hESCs under the new guidelines could be awarded as early as the current fiscal year, Kington said, in answer to a reporter's question. In anticipation of the new guidelines, NIH set aside grant applications that proposed to use ARRA funds, for example. Those applications will now be reviewed, with the new hESC policy in mind.

The Executive Order allows the NIH to revisit the rules whenever warranted.

"We believe the policy we put forth now is the right policy for where we are scientifically now," Kington concluded. "We will not confine ourselves to a calendar. We will closely watch, closely follow the evolution of the science and the evolution of the ethical debate and standards, and when we feel a compelling need to update the guidelines, we will."

NIH Honored for Supporting Clinical Research Public Outreach

At the Center for Information and Study on Clinical Research Participation (CISCRP) 2009 annual meeting, Jill McNair, national director of CISCRP's AWARE for All Clinical Research Education Days, recognized NIH for "Supporting Public Outreach and Community Building."

This spring, experts from NIH joined other medical leaders and public participants at the AWARE for All Baltimore Clinical Research Education Day held May 9 at Johns Hopkins University School of Medicine. The free educational program included informational workshops, presentations and health screenings. Representing the National Institute of Allergy and Infectious Diseases Vaccine Research Center, Senior Nurse Practitioner Sarah Hubka and Dr. Barney S. Graham discussed "The Role of the Healthy Volunteer." Dr. Susan M. Resnick of the National Institute on Aging shared her knowledge of clinical research on aging and Alzheimer's disease.

"By generously contributing time and expertise, NIH supported CISCRP and its organizational partners with the national expansion of AWARE for All to address a countrywide lack of fundamental knowledge about clinical research," said McNair.

Accepting the award on behalf of NIH was Sona Thakkar of the National Cancer Institute's Office of Communications and Education.

ORWH Seminar Looks at Diabetes, Sleep Apnea, Hypertension

By Dorie Hightower

Four perspectives on metabolic dysfunction in women were presented at the recent Office of Research on Women's Health seminar "Sex and Gender Research: Metabolic Dysfunction." Metabolic syndrome is the name for a group of risk factors linked to overweight and obesity that increase the chance for heart disease and other health problems such as diabetes and stroke.

Attendees at the recent ORWH seminar included (from l) Dr. Judith Fradkin, Dr. Andrea Dunaif, Dr. David Ehrmann, ORWH director Dr. Vivian Pinn, Dr. Kathryn Sandberg.

PHOTO: ERNIE BRANSON

Dr. Judith Fradkin of NIDDK discussed obesity trends and the worldwide diabetes epidemic and emphasized the need for education and prevention programs. "The rising tide of diabetes strikes just as we confront the health care crisis in this country with rising health care costs," she said.

Because intrauterine exposure to diabetes is associated with diabetes and obesity in offspring, NIDDK is reaching out to women at risk for gestational diabetes to make them aware of the importance of a healthy lifestyle for themselves and their children.

Dr. Andrea Dunaif of the Feinberg School of Medicine at Northwestern University presented her research that has led the way in redefining polycystic ovary syndrome (PCOS), a common endocrine condition, as a major metabolic disorder that is a leading risk factor for type 2 diabetes.

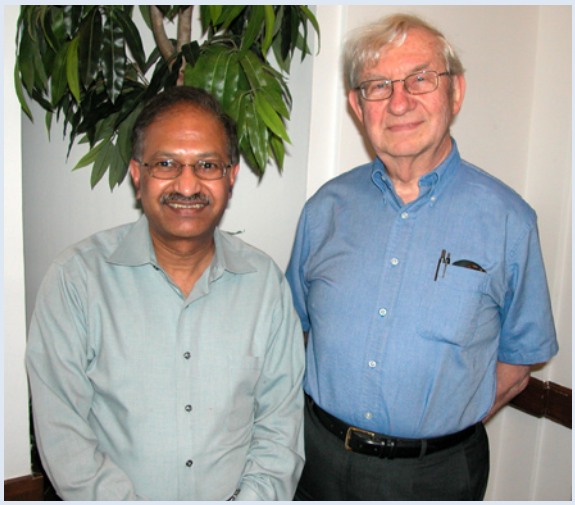
"We know that insulin, in addition to being a sugar-regulating hormone, is also a reproductive hormone and that lowering insulin levels can improve PCOS," said Dunaif. "It's now being recognized that high androgen levels contribute to the disorder and are also responsible for an independent risk for metabolic syndrome and insulin resistance."

Dr. David Ehrmann of the University of Chicago Medical Center talked about the relationship between obstructive sleep apnea (OSA) and the metabolic disturbances of PCOS.

"PCOS represents a unique and important model in which to examine the causal relationships between OSA and metabolic dysfunction," he said. "While it is true that men tend to have a higher prevalence of obstructive sleep apnea, PCOS is a model to look at this gender-based difference. As it turns out, obstructive sleep apnea has metabolic consequences and is connected to androgen levels, obesity and insulin resistance and PCOS."

Dr. Kathryn Sandberg of Georgetown University discussed sex differences in hypertension and associated cardiovascular and renal disease and why premenopausal females are protected from renal-cardiovascular disease compared to men and postmenopausal women. Her studies suggest that sex differences in gonadal steroid regulation contribute to the differences in male and female susceptibility to hypertension and renal disease progression.

The ORWH Women's Health Seminar Series features leaders in women's health research who present the latest information on topics important to women's health; the talks are free and open to the public. The next seminar, "The Interaction of Depression with Other Diseases," will be held Sept. 10.



Leading the FAES today are Dr. Krishna "Balki" Balakrishnan (l), executive director, and Dr. Edwin "Ted" Becker, president.

FAES ANNIVERSARY

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nonprofit "association for education purposes."

The founding fathers reserved for their organization the ability to acquire real estate and to conduct business ventures in support of a mission "to foster and encourage scientific research and education by…whatever means may be practicable." The eighth, and final, article stated, "The duration of the corporation shall be perpetual."

FAES may not yet have reached perpetuity, but at age 50 it has an ambitious portfolio of enterprises under way that may soon restore the organization to a prominence it has not enjoyed since the 1970s when FAES membership, and the organization's campus profile, peaked.

"We plan to treat [the anniversary] in much the same way that NIH observed its centennial [in 1987]—with a year-long series of events," said Dr. Krishna "Balki" Balakrishnan, FAES executive director since 2006. He and current FAES president Dr. Ted Becker, an NIH scientist emeritus who has been here since 1955, recently discussed the organization's timely revitalization.

"FAES does a wide variety of things," said Becker. "Some think it's just a graduate school [which began 48 years ago and is still going strong today], or a music series, or a bookstore or an insurance program." But it's all of those things, and more.

FAES has two major construction projects on the drawing board. The first is a proposed Student Faculty Academic Center (SFAC), which would be located at the heart of old Bldg. 10 and include a bookstore/coffee bar, grad school office, student and faculty lounges, and classroom space in what used to be the Visitor Information Center.

"[The SFAC] began as an FAES vision to do something nice for NIH," said Balakrishnan. "We would like to renovate the space in the center of Bldg. 10, but we are awaiting HHS approval before asking the FAES board of directors to commit construction funds." FAES would contribute $10 million to the project, which would include 9 classrooms for evening courses.

"NIH could use the rooms as conference space during the day," he said. "The bookstore would be greatly expanded [from its current location on the B1 level] and include a coffee bar." FAES administrative offices, currently located in the Cloister, would relocate to the SFAC. People who want to enroll in both the grad school and the health insurance program would do so at SFAC. There would also be a career counseling office run by the Office of Intramural Training & Education.

"We would also like to build a faculty dining room in what used to be the Medical Board Room," said Becker. "It would have room for 40-50 people and offer a better ambiance than the cafeterias. It would be a place you could take a speaker to lunch after a seminar."

The second big project involves FAES's valuable real estate holdings. In the early 1960s, FAES acquired parcels of land (one of which Anfinsen owned) opposite NIH on Cedar Ln., near Cypress Ave., with a view toward developing a Faculty Club. FAES issued bonds to raise money to acquire the land (Becker himself remembers buying a $100 bond) and hired an architect for the project, but couldn't raise sufficient funds to complete the job. Totaling 4 acres, most of the land is currently vacant, but FAES has requested a rezoning of the tract to permit about 30 townhomes accommodating 150 predoctoral and postdoctoral NIH trainees. "There is a lack of affordable close-by housing for graduate students," said Balakrishnan. Still, "it will be years before anything happens," Becker noted.

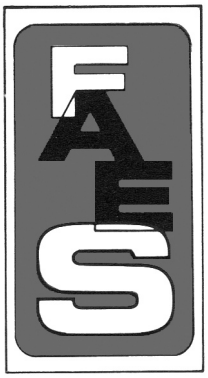
The land currently includes 4 houses. "Two of the houses are rented to families," Becker explained, "and two are rented to grad students, most of whom participate in the long-standing Oxford-Cambridge Program." We've had 40 students in those 2 houses over the past 5 years," added Balakrishnan, "and a survey showed that this amenity is highly prized. That gave us a lot of impetus to think bigger."

FAES also acquired, in 1975, a house at the corner of Cedar and Old Georgetown Rd. that is colloquially known as FAES House, but is formally titled the Social and Academic Center. Large enough to hold about 40-80 people, the house was briefly popular as an after-work place to unwind, but gradually was felt to be too far afield to become popular. Aside from holiday usage and some nursing conferences, the house is underutilized and loses money (operationally, but remains a good investment), said Balakrishnan.

How does FAES remain robust enough to embark on a development campaign? "We do make a small profit," said Balakrishnan. In addition to real estate, FAES has invested over the decades

FAES
FOUNDATION FOR ADVANCED EDUCATION IN THE SCIENCES

FAES adopted various logos over its 50 years. Above, a schoolhouse graphic marks one of several logos the organization currently uses. Below, an emblem represents an earlier era.



in mutual funds, certificates of deposit and money market funds. Becker and Balakrishnan rank the most influential FAES programs this way:

The FAES Graduate School: Begun in the fall semester of 1961, the school now enrolls some 1,500 students per year, nearly half of whom are postdocs, but does not grant degrees. The faculty is paid a modest $600/unit stipend, but many turn it down as not worth the ethics-reporting hassle. Becker taught at the school for about 30 years and has taken courses, too. "There are a lot of people here who want to learn," says Balakrishnan, "also many who like to teach and impart their knowledge. It was important to the founders to create a university-like feeling [see sidebar below]." At one time, the Graduate Program was FAES's principal source of income, but today it breaks even. FAES also administers the very successful BioTrac series of laboratory courses taught by R/M Nardone Associates in an FAES laboratory in Bldg. 60.

Health Insurance Program: Back in the early 1960s, a number of respected NIH scientists, including Dr. Phil Leder, recognized that NIH's large cadre of foreign scientists was not covered by the federal government's health insurance program. "NIH asked FAES to provide some relief for this deficiency," Balakrishnan explains. "It was a small program at the beginning—a few hundred people. But the program has mushroomed…It's mostly young people, [ages] 25 to 40," he said. "The premiums are relatively low in this demographic. And the coverage is comparable [to federal plans] or slightly better." The insurance program is now FAES's principal source of income. "It's not much money per person, but there are 4,000 [people enrolled]," said Balakrishnan.

FAES Bookstore: The store, somewhat hidden on the B1 level of Bldg. 10, has lost money for years, said Balakrishnan. However when it relocates to the first floor of Bldg. 10, in the heavily trafficked corridor that will link the South Entry with the CRC's atrium and front lobby, great expectations are in store. Especially when it begins pumping java.

FAES Chamber Music Series: The only serious cultural rival to the serious science done at NIH was epitomized by this august series, organized in 1968 by Dr. Giulio Cantoni and his accomplice Paola Saffiotti, a pianist whose husband was an NCI scientist. Cantoni wrote an FAES monograph, *Twenty-Five Years of Chamber Music at NIH*, which covered every performance given between 1968 and 1993. The series expired with the death of Saffiotti in 2008, but classical music is again on the FAES menu because the foundation has taken over from Merck & Co., Inc., sponsorship, for at least the next 3 years, of the Manchester String Quartet performances that take place 8 times a year in Masur Auditorium.

As rich and varied an influence as FAES exerts, the foundation still lacks the profile it enjoyed in the 1970s, when more than 1,000 members, both on campus and in chapters throughout the country, paid modest dues to join. When Becker

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A Word from FAES's Sole Surviving Founder

Only one founding member of FAES survives—Dr. Daniel Steinberg, FAES's first president, who is now scientist emeritus at the University of California, San Diego—but his recollections of the origins of FAES remain acute.

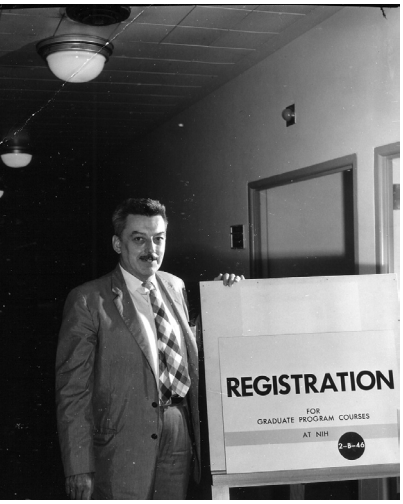
"FAES was established to provide a mechanism for offering formal teaching programs to our postdoctoral fellows," he recalls. "Some of us, and I, in particular, wanted to take advantage of the remarkable concentration of experts in the biomedical sciences at NIH and let the trainees at various levels learn from them. Also, we missed the traditions and trappings of academia—NIH was intensely focused on research. In fact, when we first proposed introducing formal course work, we were told by [then NIH director Dr.] Jim Shannon that NIH could not endorse or support such a program—he felt it was not part of the mission of NIH. To get around these strictures, Chris Anfinsen, Bob Berliner and I, with administrative advice from Murray Brown, struck a deal with the U.S. Department of Agriculture. They had an okay to operate a night-school program and they agreed to fold our program into their already-up-and-running program. That was around 1953 or 1954. For a number of reasons that arrangement broke down and in 1959 we created a nonprofit corporation, FAES, to take over the operation of the teaching programs at NIH."

Steinberg, who left NIH in 1968, remembers that FAES tried to set up a joint graduate program with Johns Hopkins University, but "Shannon called me to his office and made it clear that he did not feel this would wash. If NIH were to get into the graduate school business, he said, any and all universities in the United States would have to have equal opportunity to participate. Besides, such a program might dilute the concentration on research, the real mission of NIH. Our arguments that it might actually strengthen the research atmosphere by adding formal training opportunities and bringing young minds into [NIH] failed to convince him."

There was "another and more substantive reason for expanding the teaching programs under FAES," Steinberg notes. "We recognized that the flow of outstanding research and clinical associates applying while the doctor-draft was in place might dry up and that NIH would then have to compete on an even playing field with universities. The opportunity for formal training afforded by the FAES programs would then be a considerable asset."

Asked whether FAES met his expectations as it developed, Steinberg answered, "We were all really happy with how FAES worked. Having a mechanism to do things outside the major mission of NIH, people began to find other uses for it. For example, Giulio Cantoni, a passionate music lover, wanted to run a chamber music series in the Clinical Center auditorium. Well, believe me, that did not fit very comfortably into any congressionally mandated missions of NIH. But FAES could, as a nonprofit organization, handle the funding. The NIH director could—and did—make the space available to FAES as to any private group. It worked beautifully!"

Is Steinberg surprised that FAES has lasted so long? "At my age I find myself participating in a lot of 50th anniversaries [50th for NHLBI; 50th for *Journal of Lipid Research*] so, no, I'm not that surprised that FAES is doing the same. I know that NIH has been blessed with special status in some respects but it is still a government agency and I'm not at all surprised that the FAES continues to help all of you there do things outside the box. Keep up the good works."



Above, an old registration sign for the organization that began in 1959; in the sidebar below, another logo from FAES's past

CONTINUED FROM PAGE 7

joined FAES in the early 1960s, membership was common among campus scientists, but interest waned over the years.

"It started out with a bang and kind of frittered away," he remembers. "Not enough attention was paid to [nurturing the organization]. There are not too many members now." As part of its 50th anniversary, FAES will launch a membership campaign, with yearly fees set at $15.

"It's not so much for the money," Becker said, "but to get [people's] interest."

Another factor in FAES's brand-recognition conundrum, apart from its multifarious identity, is confusion with the Foundation for the National Institutes of Health, which was created not by scientists but by Congress.

"FNIH was originally created to pay higher salaries to scientists," Becker explained. "But that didn't materialize. It did, however, win the authority to run a graduate education program and a bookstore. The two foundations almost merged at one point, but we decided just to set up an agreement to let FAES continue running its traditional programs."

A memorandum of understanding, with no expiration clause, enables FAES to pursue its core functions of the past half century—school and books.

FAES is governed by a 26-member board of directors, most of whom are not employees. The top officers—president, vice president and treasurer—cannot be NIH'ers, due to ethics rules, said Becker, who is starting his second year as president.

Look for more details about the 50th anniversary celebration in upcoming issues of the *Record*. FAES plans a special event to coincide with its board meeting in April 2010.

What They're Saying About FAES

It's a pretty good reflection on the value of FAES when the biggest criticism leveled against it is that it's not better known.

"Most people don't know we exist," said Dr. Robert Adelstein, chief of NHLBI's Laboratory of Molecular Cardiology, who came to NIH in 1961, was president of FAES in the late 1970s and has served in other leadership capacities. "We need more young people…not enough people know about FAES and what it does."

Adelstein believes that NIH can't be a topnotch research institution without a teaching function. By offering the opportunity to teach, FAES helps NIH recruit the most talented postdocs, he says. "The good ones will want to teach, so that they can get jobs and won't be at a disadvantage," he explains.

Adelstein became an FAES instructor because "I wanted to learn how to give a seminar. Teaching is difficult. It's not trivial." He says the Graduate School is "the most important part of FAES. There are more than 400 postbacs and graduate students here—that's a very important population at NIH."

Adelstein began his teaching career with a course on protein chemistry; his co-instructor was Dr. Alan Schechter; both men were protégés of Nobel laureate Dr. Christian Anfinsen, a founder of FAES.

Schechter, now chief of NIDDK's Molecular Medicine Branch and senior historical consultant to NIH, says Anfinsen "believed strongly in the importance of educational activities for a viable research organization." He says FAES benefited him by "allowing me early on to get to know personally many of the then current or future leaders of NIH." As chair of the grad school's department of biochemistry, Schechter, who has held virtually every leadership position at FAES, also got to know many campus biochemists.

"FAES has made the NIH much more like a research university than is true for almost any other government research laboratory," he said. "This, in my opinion, is a crucial reason for the continued excellence of the intramural research program (IRP)."

The current head of the IRP, Dr. Michael Gottesman, has been involved with FAES for 30 years, serving terms on the board of directors and as secretary of the board. "For the past 15 years," he notes, "during the time that I have been deputy director for intramural research, I have enjoyed many formal and informal interactions with the FAES, involving development of joint programs to support the mission of the NIH in research and training…FAES is totally dedicated to the success of the NIH Intramural Research Program."

Gottesman believes that once FAES builds its planned Student Faculty Academic Center in Bldg. 10, it will become better known on campus.

NIAMS scientist emeritus Dr. Henry Metzger taught in the graduate school, served on the FAES board, beginning in 1970, and was twice FAES president. Teaching, he said, helped him communicate and understand science better, and board work refined his leadership ability in various professional associations.

Like Adelstein, Metzger puts the teaching mission at the forefront of FAES's value to the campus: "With the increasing complexity of both theoretical and practical aspects of contemporary science, the menu of courses permits even those with a strong scientific background to broaden their expertise."

Current grad school dean and faculty member Dr. Connie Noguchi, who is also chief of NIDDK's molecular cell biology section, says "teaching a topic is the best way to learn. I continue teaching to learn and as a community service." She thinks "each new employee should be given a pamphlet explaining the FAES programs and opportunities." Whether as teachers or students, NIH'ers, she says, "should take advantage of the tremendous expertise around campus beyond one's own research area."

digest

A Child's IQ Can Be Affected by Mother's Exposure to Urban Air Pollutants

A mother's exposure to urban air pollutants known as polycyclic aromatic hydrocarbons (PAHs) can adversely affect a child's intelligence quotient or IQ, an NIH-funded study reports in the August issue of *Pediatrics*. PAHs are chemicals released into the air from the burning of coal, diesel, oil and gas, or other organic substances such as tobacco. In urban areas, motor vehicles are a major source of PAHs. The study, funded by the National Institute of Environmental Health Sciences, the Environmental Protection Agency and several private foundations, found that children exposed to high levels of PAHs in New York City had full-scale and verbal IQ scores that were 4.31 and 4.67 points lower than those of less exposed children. "This is the first study to report an association between PAH exposure and IQ," said NIEHS director Dr. Linda Birnbaum, "and it should serve as a warning bell to us all. We need to do more to prevent environmental exposures from harming our children."

NIH Launches Human Connectome Project to Map Brain Connections

The NIH Blueprint for Neuroscience Research is launching a $30 million project that will use cutting-edge brain imaging technologies to map the circuitry of the healthy adult human brain. By systematically collecting brain imaging data from hundreds of subjects, the Human Connectome Project (HCP) will yield insight into how brain connections underlie brain function and will open up new lines of inquiry for human neuroscience. Investigators have been invited to submit detailed proposals to carry out the HCP, which will be funded at up to $6 million per year for 5 years. The HCP is the first of three Blueprint Grand Challenges intended to promote major leaps in the understanding of brain function and in approaches for treating brain disorders. The challenges to be launched in 2009 and 2010 address connectivity of the adult human brain, targeted drug development for neurological diseases and the neural basis of chronic pain disorders.

Surprising Truth about Dachshunds, Other Dogs with Short Legs

A single evolutionary event appears to explain the short, curved legs that characterize all of today's dachshunds, corgis, basset hounds and at least 16 other breeds of dogs, according to a team led by the National Human Genome Research Institute. In addition to what it reveals about short-legged dogs, the unexpected discovery provides new clues about how physical differences may arise within species and suggests new approaches to understanding a form of human dwarfism. In a study published in the advance online edition of the journal *Science*, researchers led by NHGRI's Dr. Elaine Ostrander examined DNA samples from 835 dogs, including 95 with short legs. Their survey of more than 40,000 markers of DNA variation uncovered a genetic signature exclusive to certain breeds. Specifically, they found that all short-legged dog breeds have an extra copy of the gene that codes for a growth-promoting protein called fibroblast growth factor 4.

NHGRI researchers are part of a team that identified a retrogene that underlies the short, curved legs of dog breeds, including the dachshund and at least 18 other breeds.

PHOTOS: TYRONE SPADY, ETHAN HALL

Discovery of New Transmission Patterns May Help Prevent Rotavirus Epidemics

New vaccines have the potential to prevent or temper epidemics of the childhood diarrhea-causing disease rotavirus, protect the unvaccinated and raise the age at which the infection first appears in children, federal researchers reported. The findings were based on changing patterns of rotavirus transmission in the United States, where the disease is rarely fatal. The results have implications for combating epidemics in other countries where the death toll is much higher. Published in the July 17 issue of *Science*, the research is based on mathematical modeling that takes into account regional birth rates and predicted vaccination levels and effectiveness. The model suggests that when 80 percent or more of children in a given population are vaccinated, annual epidemics may occur on a less regular basis and more unvaccinated children will be protected. Data from 2007-2008, when vaccination first reached appreciable coverage levels in the U.S., validate the model's predictions. The study showed for the first time that the timing of rotavirus epidemics is dependent on the birth rate in the population because they are driven by infants who have never been infected before. The modeling and analysis were done by a team that included researchers from the Fogarty International Center and CDC.—

compiled by Carla Garnett

FLU SUMMIT

CONTINUED FROM PAGE 1

Above left, NIAID director Dr. Anthony Fauci (r) shares a moment with Bill Modzeleski of the Department of Education. During the summit's early hours, Fauci offered details on NIH's role in the fight against H1N1. At right, Secretary Sebelius discusses federal government preparations for the fall season, when the flu pandemic is predicted to pick up speed again.

PHOTOS: BILL BRANSON

Joining them were Maryland Governor Martin O'Malley and Rep. Chris Van Hollen, whose congressional district includes Bethesda.

"The most important thing for us to do," said Obama, "is to make sure that state and local officials prepare now to implement a vaccination program in the fall."

Sebelius outlined the federal government's response.

A voluntary fall vaccination program against the 2009 H1N1 flu virus, she said, will depend on the availability of a safe and effective vaccine. Once it becomes available, the first shots likely would be given to school children, health care workers, pregnant women and people with underlying ailments that might increase their risk.

NIH: Part of the Team

NIH research has played a crucial role in responding to the 2009 H1N1 flu virus. The next step is preparing and field-testing the vaccine.

"NIH will use our…clinical trial infrastructure to quickly evaluate pilot lots of vaccine candidates," said NIAID director Dr. Anthony Fauci. By early August, he said, "We hope to start our first clinical trials of 2009 H1N1 vaccine candidates."

As testing confirms the vaccine's safety, effectiveness, appropriate dose and number of dosages, the Centers for Disease Control and Prevention is organizing state, territorial, city and tribal health departments to line up vaccination programs.

With the caveat that no final decision has been made, Sebelius said that the vaccination drive might begin as soon as mid-October.

She also encouraged people to get a regular flu shot to protect them from seasonal flu, which is distinct from the H1N1. Seasonal flu alone kills about 36,000 people in the U.S. annually.

'This flu is not over'

Typically, the influenza virus does not survive well at temperatures above 70 degrees, which helps explain why "flu season" starts in the fall.

Yet the novel (that is, new) H1N1 virus hit the U.S. last spring.

"This flu is not over," said Dr. Thomas Frieden, newly appointed head of the CDC.

H1N1 has not only continued to spread in U.S. summer camps, he said, it's also active in the southern hemisphere, currently in its own flu season.

After appearing in the U.S. in April, H1N1 has spread to all 50 states. Of the estimated 1 million Americans infected, more than 260 had died as of mid-July. Worldwide, some 160 countries have reported cases. Officials are concerned that the outbreak here could worsen when fall arrives and schools open.

There are about 100,000 schools in the U.S. and closures have a significant ripple effect, aggravating parents' logistical challenges while straining their resources.

Get a Plan

Napolitano urged schools and businesses to make contingency plans for increased absenteeism and disruptions in service.

"As a former governor, I can say: Make sure your payroll continues," she said. "Whoever processes your checks, make sure they have a backup."

School nurse Mary Pappas was on the front line when the flu hit New York City last spring. The only nurse for 2,700 students at St. Francis Preparatory School, she described how she coped with limited resources, space and staff.

"I had every kid [being sent home sick] pull out their cell phone, because I had only one office line," she said. "I got security guards to help."

Calling All Public Service Announcements

To help families and communities prepare, HHS Secretary Kathleen Sebelius said HHS is updating its web site, www.flu.gov, with checklists and fact sheets.

And to raise public awareness, "This is our YouTube challenge to everyone," she said. "We're inviting the American people to record and submit their own 60-second public service announcement regarding the H1N1 virus."

The winning PSA will air on national television and receive a $2,500 cash award.

"This H1N1 pandemic is a tremendous challenge that has brought real hardship," said Sebelius. "But it has also brought a valuable opportunity. The attention being paid to the H1N1 virus is accelerating our work to improve the entire public health system."

A panel on preparedness lessons learned from states and localities includes (from l) Dr. Marcelle Layton of the New York City department of health and mental hygiene, Dr. Damon Arnold of the Illinois department of public health and the Illinois Army National Guard, and moderator Dr. Stephen Redd of CDC's influenza coordination unit. Also on that panel is Anslem Roanhorse, Jr., (below) of the Navajo Nation division of health.

Schools should designate "ready rooms [isolation areas]," she said, to handle infected students waiting for their parents. And Pappas offered students this tip: "I told them: If it's wet, and it's not yours, don't touch it."

Who's Closing? Who's Funding?

O'Malley moderated a videoconference Q&A with several other state governors. Most had questions about school closures and vaccination program funding.

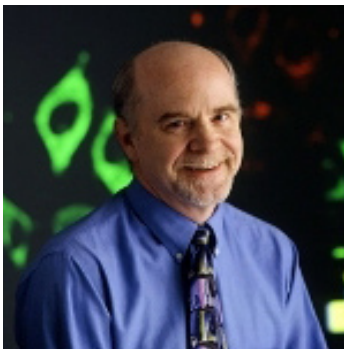
Education secretary Duncan noted that, at the peak of the outbreak in May, 726 schools closed. This fall, any decisions to close schools will be made on the local level, he said. The Obama administration will offer updated, clear guidelines "on a case-by-case basis."

Sebelius said that the federal government will provide $260 million in "preparedness grants" to all U.S. states and interests for the vaccination effort and $90 million to hospitals for a projected surge in cases.

"A federally funded vaccination program may recapture payments from insurers, but we don't anticipate [that states will cover the costs]," Sebelius said. "This will be a public effort funded by the federal government."

Congress has already appropriated $1 billion to purchase bulk ingredients, and up to $7.5 billion more for vaccine testing, purchase and distribution.

milestones



NIAMS's O'Shea Receives Irish Society Honors

Dr. John J. O'Shea, NIAMS scientific director, recently received the 2009 Irish Society for Immunology Public Lecture Award in Dublin, Ireland. The society annually honors an outstanding immunologist in recognition of his/her contribution to the understanding of immunology and health improvement.

As part of the award, O'Shea was invited to deliver a talk about his research. Sponsored by the Royal Society of Dublin, the Irish Society of Immunology and the *Irish Times*, the lecture was titled "Learning from Patients: How Rare Diseases Inform Immunology." He discussed two rare immunodeficiency diseases and how studying the molecular basis of these diseases has offered new insights into immunoregulation. He also explained how one of these disorders led to the generation of a new class of immunosuppressant drugs.

O'Shea came to NIAMS in 1994 and currently leads the Molecular Immunology and Inflammation Branch in conducting basic and clinical investigations on the molecular mechanisms underlying immune and inflammatory responses in rheumatic and autoimmune diseases.

OIR's Mills Retires

Friends and colleagues of Deloris Mills gathered at the Cloister on May 29 to celebrate her retirement after 34 years of government service.

Her service to numerous parts of the NIH culminated most recently with her contributions to the Office of Intramural Research (OIR) under the leadership of Dr. Michael Gottesman, NIH deputy director for intramural research. He praised Mills for many of the same qualities found in NIH scientists, including persistence and creativity.

In addition to service to OIR's Office of Human Subjects Research and the administrative office, she supported the Intramural AIDS Targeted Antivirals Program (IATAP) led by NIDDK's Dr. William Eaton. Many of the laboratory scientists supported by this program attended the reception to honor Mills. IATAP has supported novel approaches to study the biophysical structure of HIV over the past 22 years with an investment of over $125 million.

Mills is succeeded in these duties by Jackie Roberts in the OIR. Mills' colleagues wished her well in retirement and applauded her upcoming active roles in the life of her church and community.

At left, students in the Jeter's Leaders program visit with Dr. Dennis Twombly of NIAAA in front of his interactive Drunken Brain exhibit. Right, Dr. Fumihito Ono shares a laugh with the group during their visit to his zebrafish lab. PHOTOS: FRED DONODEO

A Field of Science Dreams

Teens Visit NIH for Alcohol Science, Education Program

By Gregory Roa

For baseball lovers, summertime means heading to the ballpark to root, root, root for the home team. But for some young fans of Yankees shortstop Derek Jeter, it means a road trip to NIH. They belong to Jeter's Leaders, a youth leadership program named for the baseball superstar and funded by his Turn 2 Foundation. On July 7, 60 students from the group traveled to Bethesda to see the "big leagues" of biomedical research.

This marked the sixth year that Jeter's Leaders have visited NIH, a relationship that started with an invitation from NIAAA public liaison officer Fred Donodeo. "It's a great match for our outreach efforts because the program serves youth from New York City and Kalamazoo, Michigan, who are committed to living healthy lifestyles and becoming peer educators," he said. From the day's opening pitch, an introductory overview about NIH from Visitor Center director Jennifer Gorman, this year's students were once again treated to a full lineup of science presentations.

Leading off was Dr. Judith Arroyo, an alcohol treatment and prevention researcher and NIAAA's coordinator for minority health and health disparities program. Smiles broke out across the room as she began her presentation in rapid-fire, fluent Spanish. As a first-generation child of Mexican immigrants, Arroyo is bilingual and bicultural, something she has in common with many of the Jeter's Leaders students whose families also came to the U.S. from Latin American countries. She discussed her background and presented results of NIAAA-sponsored research on alcohol use disorders in Latino and other ethnic communities.

"I think I got their attention with my Spanish. It's not every day these kids get to meet someone with a Ph.D. who can tell them *in Spanish* she did not speak English when she started school," says Arroyo. "It's important to model that attribute to them, so they know somebody with a similar background can excel in science and go on to college and advanced studies."

Next up was Dr. Vivian Faden, acting director of NIAAA's Office of Science Policy and Communications, and a senior scientific editor of the Surgeon General's Call to Action to Prevent and Reduce Underage Drinking. Faden explained why underage drinking is one of NIAAA's research priorities. She then fielded a barrage of questions on binge drinking and related topics. "The students asked fascinating questions," she said, "giving us a window into how they process scientific information and relate it to observations about their family and friends."

The students then toured the National Library of Medicine's exhibit on global health, allowing a seventh-inning stretch before visiting Dr. Markus Heilig, NIAAA clinical director. He described how alcohol use can progress to alcohol dependence.

For the next half of the double-header program, the group split up for site visits. The "rookies" on their first NIH experience traveled to the Poolesville facility for a tour and presentation by Dr. Christina Barr, who investigates the interaction of alcohol and genes involved in the brain's reward circuitry. Meanwhile, the veterans from previous trips viewed the Drunken Brain exhibit created by NIAAA scientist Dr. Dennis Twombly.

Always a popular speaker with the students, Twombly threw a curveball this year by revealing he had planned with the team's coordinator to show the older students how to set up and present their own Drunken Brain exhibit for younger audiences back home. "The kids usually are good listeners anyway, but this year I think they paid extra attention knowing they'd be expected to give this talk themselves," said Twombly.

The day's big closer was Dr. Fumihito Ono in NIAAA's Laboratory of Molecular Physiology. He explained how the tiny zebrafish has a big role in advancing our understanding of alcohol exposure during development. Peering closely at some zebrafish, one student was amazed as a hatchling emerged right before her eyes. "That baby should be named after me," she announced proudly to her friends.

"For me, that moment was like a home run," said Donodeo. "That's the kind of enthusiasm for science that can only come through a hands-on experience like today's visit." He looks forward to welcoming future students to a front row seat at the friendly confines of NIH.